

NEW
PRODUCT!

AHM25-LN10

High Feed Milling Cutter



Achteck is launching a new high feed milling cutter AHM25-LN10, which expands the application range of the existing AHM20-LN06 product. The insert is also with negative double-sided 4 cutting edges, but the insert size is bigger and suitable for bigger depth of cut; Two kinds of geometry MM3 and MM4 combined with Achteck's PVD coating can cover steel, stainless steel, super alloy material machining.

Product Features

- Cutter diameter range: $\Phi 25\text{mm}-\Phi 125\text{mm}$
- Approach angle: 25°
- Max depth of cut: 1.2mm
- The insert has 4 cutting edges, economic choice
- Geometry: MM3 and MM4
- Coupling type: Screw modular type, Cylindrical type, Shell mill(Arbor)

Geometry Features

Geometry	Edge shape	Applications
MM4		- For medium machining; 1st choice for general machining;
MM3		- Low cutting force(for low power machine); - Used for steel, stainless steel and super alloy machining;

Grade Application

Grade	Coating	Material					
		P	M	K	S	N	H
AP301U	PVD	●	◐	◐	◐		◐
AP351U	PVD	●	◐		◐		
AP403S	PVD		◐		●		
AP403M	PVD	◐	●		◐		
AP151H	PVD						●

● Marked: 1st choice ◐ Marked: 2nd choice ○ Marked: supplementary application

Case study

Work piece: Die mould

Material: 1Cr13

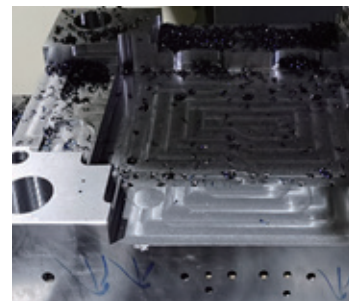
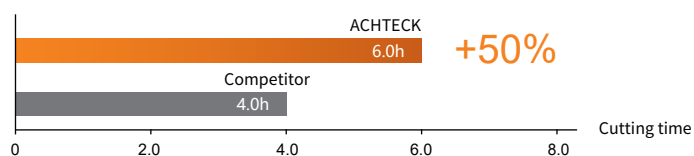
Hardness: HB280

Insert: LNMX 100512R-MM4 AP351U

Cutter: AHM25-050-Z05-A22R-LN10-C

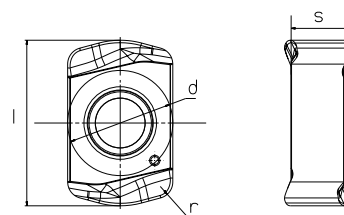
Cutting parameter: $V_c = 157 \text{ m/min}$, $f_z = 0.6 \text{ mm}$
 $a_p = 0.8 \text{ mm}$, $F = 3000 \text{ mm/min}$

Coolant: Air cooling



Insert stock item

LNMX 10

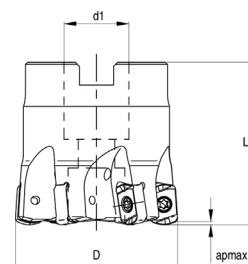
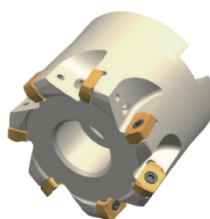


Insert	Product code	Dimensions				Grades						
		l	d	s	r	AC301P	AP301U	AP351U	AP403M	AC301K	AW100K	AP403S
	LNMX 100512R-MM3	13.5	9.2	4.55	1.2		●	●	●			●
	LNMX 100512R-MM4	13.5	9.2	4.55	1.2		●	●	●			●

Remark: ● Stocked

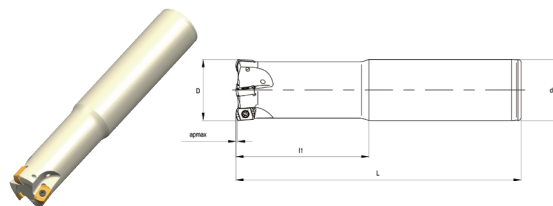
Cutter

AHM25-LN10-A Shell mill(Arbor)



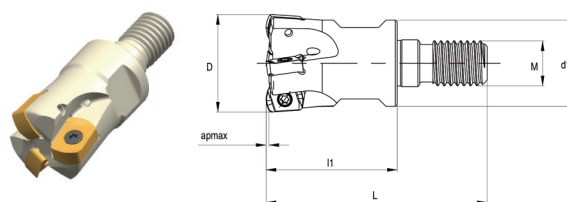
Product code	Dimension						Coolant	Z	Insert
	D	d1	L	l1	d2	apmax			
AHM25-040-Z04-A16R-LN10-C	40	16	40	-	-	1.2		4	LNMX100512
AHM25-040-Z05-A16R-LN10-C	40	16	40	-	-	1.2		5	
AHM25-050-Z05-A22R-LN10-C	50	22	40	-	-	1.2		5	
AHM25-050-Z07-A22R-LN10-C	50	22	40	-	-	1.2		7	
AHM25-063-Z06-A22R-LN10-C	63	22	40	-	-	1.2		6	
AHM25-063-Z08-A22R-LN10-C	63	22	40	-	-	1.2		8	
AHM25-080-Z07-A27R-LN10-C	80	27	50	-	-	1.2		7	
AHM25-080-Z09-A27R-LN10-C	80	27	50	-	-	1.2		9	
AHM25-100-Z08-A32R-LN10-C	100	32	50	-	-	1.2		8	
AHM25-100-Z10-A32R-LN10-C	100	32	50	-	-	1.2		10	
AHM25-125-Z12-A40R-LN10-C	125	40	63	-	-	1.2		12	

AHM25-LN10-C (Cylindrical type)



Product code	Dimension						Coolant	Z	Insert
	D	d1	L	l1	d2	apmax			
AHM25-025-Z02-C25R-LN10-L150-C	25	25	150	70	-	1.2		2	LNMX 100512
AHM25-025-Z03-C25R-LN10-L150-C	25	25	150	70	-	1.2		3	
AHM25-026-Z03-C25R-LN10-L150-C	26	25	150	30	-	1.2		3	
AHM25-026-Z03-C25R-LN10-L220-C	26	25	220	30	-	1.2		3	
AHM25-032-Z03-C32R-LN10-L160-C	32	32	160	70	-	1.2		3	
AHM25-032-Z04-C32R-LN10-L160-C	32	32	160	70	-	1.2		4	
AHM25-033-Z04-C32R-LN10-L180-C	33	32	180	30	-	1.2		4	
AHM25-033-Z04-C32R-LN10-L250-C	33	32	250	30	-	1.2		4	

AHM25-LN10-M (Screw modular type)



Product code	Dimension						Coolant	Z	Insert
	D	d1	L	L1	M	apmax			
AHM25-025-Z02-M12R-LN10-C	25	23	61	39	12	1.2		2	LNMX 100512
AHM25-025-Z03-M12R-LN10-C	25	23	61	39	12	1.2		3	
AHM25-026-Z03-M12R-LN10-C	26	23	61	39	12	1.2		3	
AHM25-032-Z03-M16R-LN10-C	32	29	69	45	16	1.2		3	
AHM25-032-Z04-M16R-LN10-C	32	29	69	45	16	1.2		4	
AHM25-033-Z04-M16R-LN10-C	33	29	69	45	16	1.2		4	

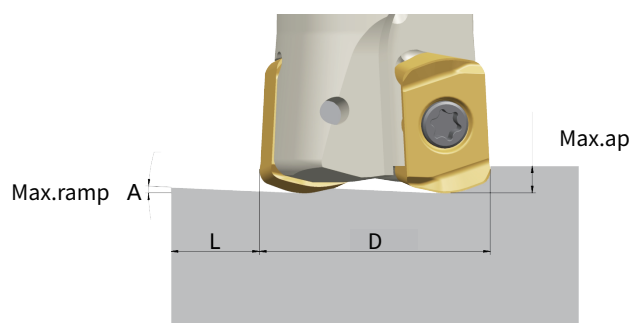
Remark: internal coolant
 external coolant

Dimension(mm)	Spare parts		
Cutter diameter	Screw	Wrench	Torque
Φ25mm - Φ125mm	SP035087H	FT-TP10	3.0Nm

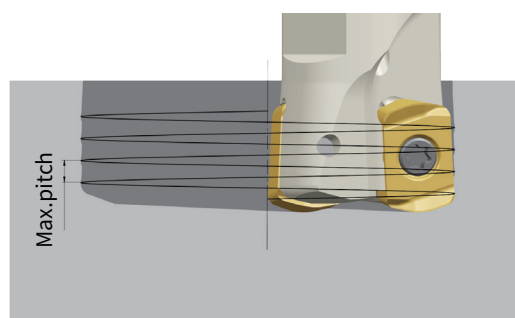
Application		
Face milling	Shoulder milling	Ramping
Helical interpolate milling	Plunging	Pocket milling

Technical information

Straight ramping

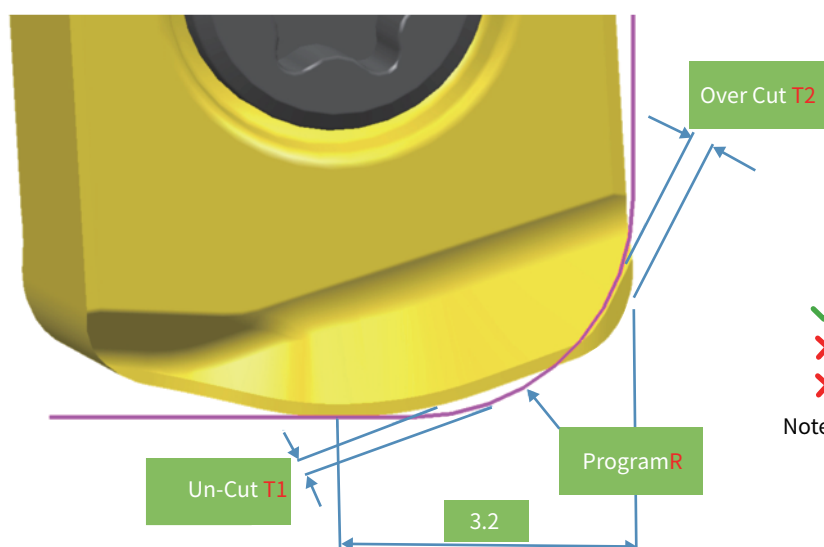


Helical interpolation



Cutter Dia(D)	Straight ramp			Helical interpolation		
	Max. ramp-(A)	Max.ap(mm)	Min.Length-L(mm)	Min.Dia.(mm)	Max.Dia.(mm)	Max.pitch(mm)
Φ25	3.7°	1.2	6.9	34	50	1.2
Φ26	3.4°	1.2	7.9	36	52	1.2
Φ32	2.3°	1.2	15	48	64	1.2
Φ33	2.2°	1.2	16	50	66	1.2
Φ35	2.0°	1.2	18	54	70	1.2
Φ40	1.6°	1.2	23	64	80	1.2
Φ50	1.2°	1.2	33	84	100	1.2
Φ63	0.9°	1.2	46	110	126	1.2
Φ80	0.6°	1.2	63	144	160	1.2
Φ100	0.5°	1.2	83	184	200	1.2
Φ125	0.4°	1.2	108	234	250	1.2

NC Program Radius



Technical information for NC program

	program R	Un-cut T1	Over-Cut T2
✓	R2.3	0.57	0
✗	R2.5	0.53	0.03
✗	R3.0	0.37	0.15

Note: select R2.3 as program R value, it won't over-cut

◆ Recommended cutting speed by materials

Achtech Milling Grade Application Ranges																	Cutting depth and feed rate										
ISO	Material classification	Tensile strength (N/mm²)	Hardness (HB)	AP301U			AP351U			AP151H			AP403M			AP403S			LNMX 1005								
				PVD			PVD			PVD			PVD			PVD				Geometry							
				P15-35			P30-45			-			P35-50			-				MM3	MM4						
				M15-35			M30-45			H10-20			M35-50			M35-50											
				-			-			-			-			-											
				-			-			-			-			-											
				-			S30-45			-			S35-50			S35-50											
				-			-			-			-			-											
				Feed rate(mm/z)																							
				Min	Med	Max	Min	Med	Max	Min	Med	Max	Min	Med	Max	Min	Med	Max							ap (mm)		
				Cutting speed(m/min)															Min	-	Max	Min	Max	Min	Max		
P	Non-alloyed steel	<600	<180	240	280	320	200	240	280									0.1	-	1.2	0.3	1.5	0.4	1.2			
		<950	<280	200	240	290	170	210	250												0.3	1.3	0.4	1			
	Alloyed steel	700-950	200-280	200	240	290	170	210	250												0.3	1.2	0.4	1			
		950-1200	280-355	170	210	260	130	170	220												0.3	1	0.4	1			
		1200-1400	355-415	130	170	210	100	130	160				80	110	140							0.3	0.8	0.4	0.8		
M	Duplex stainless steel	778	230	120	150	180	110	140	170				110	140	160	140	160				190	0.3	1.2	0.4	1.2		
	Austenitic stainless steel	1013	300	100	130	160	90	120	150				90	120	140	120	140				170	0.3	1	0.3	1		
	Precipitation-hardening stainless steel	675	200	110	140	170	100	130	160				100	130	150	110	130				160	0.3	1	0.3	1		
K	Grey cast iron	700	220																								
	Nodular Cast iron	880	260																								
	Malleable cast iron	800	250																								
S	Fe based alloy	943	280										55	65	80	60	70	80	0.3	0.8	0.3	0.8					
	Co based alloy	1076	320										45	60	65	55	65	75	0.3	0.8	0.3	0.8					
	Ni based alloy	1177	350										45	60	65	50	65	75	0.3	0.8	0.3	0.8					
	Ti-alloy	1262	370										50	60	80	50	60	80	0.3	1	0.3	0.8					
N	Aluminum	260	75																								
	Aluminum alloy	447	130																								
H	Hardened steel	-	50-60HRC							40	50	60							0.3	0.7	0.3	0.7					
	Chilled cast iron	-	55HRC							50	60	80							0.3	0.7	0.3	0.7					

* The recommended cutting conditions always refer to general conditions. These cutting conditions should be adjusted according to the practical machine rigidity, tools, work piece clamping and coolant conditions.